

# SEQUENCE LISTING

<110> Roche Diagnostics GmbH

<120> Optimized protein synthesis

<130> 29415pwo

<140> PCT/EP03

<141> 2003-12-09

<160> 57

<170> PatentIn Ver. 2.1

<210> 1

<211> 84

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<223> Description of Artificial Sequence:Primer C

<400> 1

gaaattaata cgactcacta tagggagacc acaacggttt ccctctagaa ataattttgt 60  
ttaactttaa gaaggagata tacc 84

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<211> 71

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence:Primer D

<400> 2

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gccttttatt a 71

<210> 3

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Primer A  
without hairpinloop

<400> 3

aggagatata ccatgactag caaaggagaa 30

<210> 4

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Primer A  
stem length 4 bp

<400> 4  
aggagatata ccatgactaa ttttagtact agcaaaggag aa 42

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<211> 45  
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stem length 5 bp

<400> 5  
aggagatata ccatgactgt ttatacagta actagcaaag gagaa 45

<210> 6  
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<223> Description of Artificial Sequence:Primer A  
stem length 6 bp

<400> 6  
aggagatata ccatgactgg tcaattacca gtaactagca aaggagaa 48

<210> 7  
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stem length 7 bp

<400> 7  
aggagatata ccatgactgc ttacatcaa gcagtaacta gcaaaggaga a 51

<210> 8  
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<212> DNA  
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<223> Description of Artificial Sequence:Primer A  
stem length 8 bp

<400> 8  
aggagatata ccatgactgc acgtgatcgt gcagtaacta gcaaaggaga a 51

<210> 9  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Primer B

<400> 9  
attcgcccttt tattaatgat gatgatgatg

30

<210> 10  
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<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Primer A

<400> 10  
aggagatata ccatgactag cactgcacgt gcatcgtgca gtgtaaaagg agaagaactt 60

<210> 11  
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<212> DNA  
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<223> Description of Artificial Sequence:Primer A

<400> 11  
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ttc 63

<210> 12  
<211> 66  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence:Primer A

<400> 12  
aggagatata ccatgactag caaaggaact gcacgtgcat cgtgcagtgt agaagaactt 60  
ttcact 66

<210> 13  
<211> 69  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Primer A

<400> 13  
aggagatata ccatgactag caaaggagaa actgcacgtg catcgtgcag tgtagaactt 60  
ttcactgga 69

<210> 14  
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<212> DNA  
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<220>  
<223> Description of Artificial Sequence:Primer A

<400> 14  
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ttcactggag tt 72

<210> 15  
<211> 75  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence:Primer A

<400> 15  
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ttcactggag ttgtc 75

<210> 16  
<211> 71  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Primer D

<400> 16  
caaaaaaccc ctcaagaccc gtttagaggc cccaaggggt tgggagtaga atgttaagga 60  
ttagtttatt a 71

<210> 17  
<211> 60  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Primer A

<400> 17  
aggagatata ccatgaaata tacatattct ctgcacgtga tcgtgcaggc taacaccgcg 60

<210> 18  
<211> 60  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Primer A

<400> 18  
aggagatata ccatgaaaac atattattct ctgcacgtga tcgtgcaggc taacaccgcg 60

<210> 19  
<211> 60  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Primer A

<400> 19  
aggagatata ccatgaaata ttcttataca ctgcacgtga tcgtgcaggc taacaccgcg 60

<210> 20  
<211> 60  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Primer A

<400> 20  
aggagatata ccatgaaata ttattctaca ctgcacgtga tcgtgcaggc taacaccgcg 60

<210> 21  
<211> 60  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Primer A

<400> 21  
aggagatata ccatgaaata tacatattca ctgcacgtga tcgtgcaggc taacaccgcg 60

<210> 22  
<211> 60  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Primer A

<400> 22  
aggagatata ccatgaaaac atattattca ctgcacgtga tcgtgcaggc taacaccgcg 60

<210> 23  
<211> 60  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Primer A

<400> 23  
aggagatata ccatgaaata ttcatataca ctgcacgtga tcgtgcaggc taacaccgcg 60

<210> 24  
<211> 60  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Primer A

<400> 24  
aggagatata ccatgaaata ttattcaaca ctgcacgtga tcgtgcaggc taacaccgcg 60

<210> 25  
<211> 60  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Primer A

<400> 25  
aggagatata ccatgcatca tcatcatcat ctgcacgtga tcgtgcaggc taacaccgcg 60

<210> 26  
<211> 27  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Primer wild type

<400> 26  
aggagatata ccatggctaa caccgcg 27

<210> 27  
<211> 48  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Primer B

<400> 27  
aggattagtt tattaatgat gatgatgatg atggcgccgg gtgcgcga 48

<210> 28  
<211> 60  
  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Primer A

<400> 28  
aggagatata ccatgaaata tacatattct ctgcacgtga tcgtgcaggg tgccccgacg 60

<210> 29  
<211> 60  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Primer A

<400> 29  
aggagatata ccatgaaaac atattattct ctgcacgtga tcgtgcaggg tgccccgacg 60

<210> 30  
<211> 60  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Primer A

<400> 30  
aggagatata ccatgaaata ttcttataca ctgcacgtga tcgtgcaggg tgccccgacg 60

<210> 31  
<211> 60  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Primer A

<400> 31  
aggagatata ccatgaaata ttattctaca ctgcacgtga tcgtgcaggg tgccccgacg 60

<210> 32  
<211> 60  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Primer A

<400> 32  
aggagatata ccatgaaata tacatattca ctgcacgtga tcgtgcaggg tgccccgacg 60

<210> 33  
<211> 60  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Primer A

<400> 33  
aggagatata ccatgaaaac atattattca ctgcacgtga tcgtgcaggg tgccccgacg 60

<210> 34  
<211> 60  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Primer A

<400> 34  
aggagatata ccatgaaata ttcataata ctgcacgtga tcgtgcaggg tgccccgacg 60

<210> 35  
<211> 60  
<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Primer A

<400> 35

aggagatata ccatgaaata ttattcaaca ctgcacgtga tcgtgcaggg tgccccgacg 60

<210> 36

<211> 60

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Primer A

<400> 36

aggagatata ccatgcatca tcatcatcat ctgcacgtga tcgtgcaggg tgccccgacg 60

<210> 37

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Primer A  
Wildtyp

<400> 37

aggagatata ccatgggtgc cccgacg

27

<210> 38

<211> 49

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Primer B

<400> 38

aggattagtt tattaatgat gatgatgatg atgatccatg gcagccagc

49

<210> 39

<211> 60

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Primer

<400> 39

aggagatata ccatgaaata tacatattct ctgcacgtga tcgtgcagga gttggggccc 60

<210> 40

<211> 60

<212> DNA

<213> Artificial Sequence



<220>  
<223> Description of Artificial Sequence:Primer

<400> 40  
aggagatata ccatgaaaac atattattct ctgcacgtga tcgtgcagga gttggggccc 60

<210> 41  
<211> 60  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Primer

<400> 41  
aggagatata ccatgaaata ttcttataca ctgcacgtga tcgtgcagga gttggggccc 60

<210> 42  
<211> 60  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Primer

<400> 42  
aggagatata ccatgaaata ttattctaca ctgcacgtga tcgtgcagga gttggggccc 60

<210> 43  
<211> 60  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Primer

<400> 43  
aggagatata ccatgaaata tacatattca ctgcacgtga tcgtgcagga gttggggccc 60

<210> 44  
<211> 60  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Primer

<400> 44  
aggagatata ccatgaaaac atattattca ctgcacgtga tcgtgcagga gttggggccc 60

<210> 45  
<211> 60  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Primer

<400> 45  
aggagatata ccatgaaata ttcataata ctgcacgtga tcgtgcagga gttggggccc 60

<210> 46  
<211> 60  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Primer

<400> 46  
aggagatata ccatgaaata ttattcaaca ctgcacgtga tcgtgcagga gttggggccc 60

<210> 47  
<211> 60  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Primer

<400> 47  
aggagatata ccatgcatca tcatcatcat ctgcacgtga tcgtgcagga gttggggccc 60

<210> 48  
<211> 27  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Primer A  
Wildtyp

<400> 48  
aggagatata ccatggagtt ggggccc

27

<210> 49  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Primer B

<400> 49  
aggattagtt tattattaat gatgatgatg atgatgagaa ccccc

45

<210> 50  
<211> 431  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:  
expression construct for mutant 1

<400> 50  
gaaattaata cgactcacta tagggagacc acaacggttt ccctctagaa ataattttgt 60  
ttaactttta gaaggagata taccatgaaa tatacatatt ctctgcacgt gatcgtgcag 120  
gctaacaccg cgccgggacc cacggtggcc aacaagcggg acgaaaaaca ccgtcacgtc 180  
gttaacgtcg ttttgagct gccgaccgag atatcagagg ccacccaccc ggtgttgcc 240  
accatgctga gcaagtacac gcgcatgtcc agcctgttta atgacaagtg cgcctttaag 300  
ctggacctgt tgcgcatggt agccgtgtcg cgcaccggc gccatcatca tcatcatcat 360  
taataaacta atccttaaca ttctactccc aacccttggt ggctctaaa cgggtcttga 420  
ggggtttttt g 431

<210> 51

<211> 398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:  
expression construct for wild type

<400> 51  
gaaattaata cgactcacta tagggagacc acaacggttt ccctctagaa ataattttgt 60  
ttaactttta gaaggagata taccatggct aacaccgcgc cgggaccac ggtggccaac 120  
aagcgggacg aaaaacaccg tcacgtcggt aacgtcgttt tggagctgcc gaccgagata 180  
tcagaggcca cccaccgggt gttggccacc atgctgagca agtacacgcg catgtccagc 240  
ctgtttaatg acaagtgcgc ctttaagctg gacctgttgc gcatggtagc cgtgtcgcgc 300  
acccggcgcc atcatcatca tcatcattaa taaactaatc cttaacattc tactcccaac 360  
cccttggggc ctctaaacgg gtcttgaggg gttttttg 398

<210> 52

<211> 632

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:  
expression construct mutant 1

<400> 52  
gaaattaata cgactcacta tagggagacc acaacggttt ccctctagaa ataattttgt 60  
ttaactttta gaaggagata taccatgaaa tatacatatt ctctgcacgt gatcgtgcag 120  
ggtgccccga cgttgcccc tgctggcag ccctttctca aggaccaccg catctctaca 180  
ttcaagaact ggcccttctt ggagggctgc gcctgcaccc cggagcggat ggccgaggct 240  
ggcttcatcc actgccccac tgagaacgag ccagacttgg ccagtggtt cttctgcttc 300  
aaggagctgg aaggctggga gccagatgac gaccccatag aggaacataa aaagcattcg 360  
tccggttgcg ctttcctttc tgtcaagaag cagtttgaag aattaaccct tggatgaattt 420  
ttgaaactgg acagagaaaag agccaagaac aaaattgcaa aggaaaccaa caataagaag 480  
aaagaatttg aggaaactgc gaagaaagtg cgccgtgcca tcgagcagct ggctgccatg 540  
gatcatcatc atcatcatca ttaataaact aatccttaac attctactcc caacccttg 600  
gggcctctaa acgggtcttg aggggttttt tg 632

<210> 53

<211> 599

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:  
expression construct wild type

<400> 53

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gaaattaata cgactcacta tagggagacc acaacggttt ccctctagaa ataattttgt 60
ttaacttttaa gaaggagata taccatgggt gccccgacgt tgccccctgc ctggcagccc 120
tttctcaagg accaccgcat ctctacattc aagaactggc ccttcttgga gggctgcgcc 180
tgcaccccg agcggatggc cgaggctggc ttcattccact gccccactga gaacgagcca 240
gacttgcccc agtggtttctt ctgcttcaag gagctggaag gctgggagcc agatgacgac 300
cccatagagg aacataaaaa gcattcgtcc ggttgcgctt tcctttctgt caagaagcag 360
tttgaagaat taacccttgg tgaatttttg aaactggaca gagaaagagc caagaacaaa 420
attgcaaagg aaaccaacaa taagaagaaa gaatttgagg aaactgcgaa gaaagtgcgc 480
cgtgccatcg agcagctggc tgccatggat catcatcatc atcatcatta ataaactaat 540
ccttaacatt ctactcccaa ccccttgggg cctctaaacg ggtcttgagg ggttttttg 599

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<210> 54

<211> 1400

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:  
expression construct mutant 1

<400> 54

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gaaattaata cgactcacta tagggagacc acaacggttt ccctctagaa ataattttgt 60
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gagttggggc ccctagaagg tggctacctg gagcttctta acagcgatgc tgacccccctg 180
tgctctacc acttctatga ccagatggac ctggctggag aagaagagat tgagctctac 240
tcagaacccg acacagacac catcaactgc gaccagttca gcaggctgtt gtgtgacatg 300
gaagtgatg aagagaccag ggaggttat gccaatatcg cggaactgga ccagtatgtc 360
ttccaggact cccagctgga gggcctgagc aaggacattt tcaagcacat aggaccagat 420
gaagtgatcg gtgagagtat ggagatgcca gcagaagttg ggcagaaaag tcagaaaaga 480
cccttcccag aggagcttcc ggcagacctg aagcactgga agccagctga gccccccact 540
gtggtgactg cgagtctcct agtgggacca gtgagcgact gctccacctt gccctgcctg 600
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gaccagattc ccatgccttt ctccagttcc tcgttgagct gcctgaatct ccctgaggga 720
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gctggaacag gggctctccag tatattcatc taccatggtg aggtgccccca ggccagccaa 840
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gactgggcag aacggcagct ggcccaagga ggcctggctg aggtgctgtt ggctgccaag 1260
gagcaccggc ggccgcgtcg actcgagcga gctcccgggg ggggttctca tcatcatcat 1320
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gggtcttgag gggttttttg 1400

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<210> 55

<211> 1367

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:  
expression construct wild type

<400> 55

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gaaattaata cgactcacta tagggagacc acaacggttt ccctctagaa ataattttgt 60
ttaacttttaa gaaggagata taccatggag ttggggcccc tagaagggtg ctacctggag 120
cttcttaaca gcgatgctga cccctgtgc ctctaccact tctatgacca gatggacctg 180
gctggagaag aagagattga gctctactca gaacccgaca cagacaccat caactgcgac 240
cagttcagca ggctgttgtg tgacatggaa ggtgatgaag agaccagggg ggcttatgcc 300

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aatatcgcgg aactggacca gtatgtcttc caggactccc agctggaggg cctgagcaag 360
gacattttca agcacatagg accagatgaa gtgatcggtg agagtatgga gatgccagca 420
gaagttgggc agaaaagtca gaaaagaccc ttcccagagg agcttccggc agacctgaag 480
cactggaagc cagctgagcc cccactgtg gtgactggca gtctcctagt gggaccagtg 540
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tccggccaga tgcgcctgga gaaaaccgac cagattccca tgctttctc cagttcctcg 660
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ccccatgggc tctggcaaat ctctgaggct ggaacagggg tctccagtat attcatctac 780
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ccggtggagc agttctaccg ctactgcag gacacgtatg gtgccgagcc cgcaggcccc 1080
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ctggctgagg tgctgttggc tgccaaggag caccggcggc cgcgtcgact cgagcgagct 1260
cccggggggg gttctcatca tcatcatcat cattaataat aaactaatcc ttaacattct 1320
actcccaacc ccttgggggc tctaaacggg tcttgagggg ttttttg 1367

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<210> 56

<211> 938

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial  
Sequence:expression construct

<400> 56

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actagcaaaag gagaagaact tttcactgga gttgtcccaa ttcttgttga attagatggt 180
gatgttaatg ggcacaaatt ttctgtcagt ggagaggggtg aaggtgatgc tacatacggg 240
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gtcactactt tctcttatgg tgttcaatgc ttttcccgtt atccggatca tatgaaacgg 360
catgactttt tcaagagtgc catgcccga ggttatgtac aggaacgcac tatacttttc 420
aaagatgacg ggaactacaa gacgcgtgct gaagtcaagt ttgaaggatg tacccttgtt 480
aatcgtatcg agttaaaagg tattgatttt aaagaagatg gaaacattct cggacacaaa 540
ctcgagtaca actataactc acacaatgta tacatcacgg cagacaaaca aaagaatgga 600
atcaaagcta acttcaaaat tcgccacaac attgaagatg gatccgttca actagcagac 660
cattatcaac aaaataactc aattggcgat ggccctgtcc ttttaccaga caaccattac 720
ctgtcgacac aatctgccct ttcgaaagat cccaacgaaa agagagacca catggtcctt 780
cttgagtttg taacagctgc tgggattaca catggcatgg atgaactata caaaccggg 840
gggggttctc atcatcatca tcatcattaa taaactaatc cttaacattc tactcccaac 900
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<210> 57

<211> 905

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:  
expression construct

<400> 57

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gtcccaattc ttgttgaatt agatggtgat gttaatgggc acaaattttc tgtcagtggg 180
gaggtggaag gtgatgctac atacggaaag cttaccctta aatttatattg cactactgga 240
aaactacctg ttccatggcc aacacttgct actactttct cttatggtgt tcaatgcttt 300

```

tcccgttata	cggatcatat	gaaacggcat	gactttttca	agagtgccat	gcccgaaggt	360
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gtcaagtttg	aagggtgatac	ccttgттаат	cgtatcgagt	taaaagggtat	tgattttaaa	480
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gaagatggat	ccgttcaact	agcagaccat	tatcaacaaa	atactccaat	tggcgaatggc	660
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